What Is Claimed:

1. A method for stimulating the differentiation of vascular smooth muscle cells comprising culturing neural crest cells under conditions wherein SM22α gene expression is induced.

2. The method of claim 1, wherien the neural crest cells are immortalized cells.

3. The method of claim 1, wherein the neural crest cells are cultured in smooth muscle cell differentiation medium.

4. The method of claim 3, wherein said smooth muscle cell differentiation medium comprises the media components listed in Table 1 supplemented with 10% fetal bovine serum, penicillin (100 units/ml), streptomycin (100 μg/ml), and 25 mM Hepes (pH 7.4).

5. The method of claim 3, wherein said immortalized neural crest cells are first cultured in complete medium.

6. The method of claim 5, wherein said complete medium comprises an L-15 CO_2-based medium supplemented with chick embryo extract.

7. A method for identifying a gene which regulates proliferation or migration of a smooth muscle cells, comprising

(i) culturing neural crest cells under culture conditions wherein SM22α gene expression is induced for a time period sufficient for the neural crest cells to begin differentiation to smooth muscle cells;

(ii) identifying genes which are up- or down-regulated under the culture conditions.

8. The method of claim 7, wherein the step of identifying genes which are up- or down-regulated includes differential display of mRNA from the culture cells with mRNA from non-smooth muscle cells.

9. The method of claim 7, wherein one or more genes which are up- or down-regulated under the culture conditions are cloned.

10. A method of identifying an agent that modulates which regulates proliferation or migration of smooth muscle cells, comprising:

(a) stimulating the differentiation of vascular smooth muscle cells comprising culturing neural crest cells under culture conditions wherein SM22α gene expression is induced for a time period sufficient for the neural crest cells to begin differentiation to smooth muscle cells;

(b) contacting the cells with a test agent; and

(c) measuring the ability of the test agent to inhibit the differentiation of the neural crest cells to smooth muscle cells.

11. The method of claim 10, wherein the ability of the agent to inhibit the differentiation of the neural crest cells to smooth muscle cells is measured by detecting the presence or absence of smooth muscle cell markers.

12. A method for identifying an agent that modulates proliferation or migration of smooth muscle cells, comprising:

(i) identifying a gene product which is up- or down-regulated during differentiation of neural crest cells to smooth muscle cells;

(ii) identifying an agent which inhibits or potentiates an activity of the gene product.

13. The method of claim 12, wherein the gene product is selected from the group

consisting of a latent TGFβ binding protein, an integrin-linked kinase, an aortic carboxypeptidase, a a Torsin, cctζ, a prothymosin, Limk2, Cca (confluent 3Y1 cell-associated), an interferon activatible protein, an internexin, a Caspase, AHNAK, Desmoyokin, TSC-36 (TGF inducible protein), Transcobalamin, a fos-related antigen, an epididymal secretory protein E1 precursor (HE1), a ubiquitin carboxyl-terminal hydrolase, a thyrptropin releasing hormone, and a Decorin.

14. A method for identifying an agent that inhibits proliferation and/or migration of smooth muscle cells, comprising:

(i) identifying a gene product which is up-regulated during differentiation of neural crest cells to smooth muscle cells, the gene product having a biological activity required for proliferation and/or migration of smooth muscle cells;

(ii) identifying an agent which inhibits the biological activity of the gene product.

15. A method for identifying an agent that modulates proliferation and/or migration of smooth muscle cells, comprising:

(i) identifying an agent which alters the biological activity of a latent TGFβ binding protein (LTBP), and

(ii) assessing the ability of the agent to modulate proliferation and/or migration of smooth muscle cells.

16. The method of claim 15, wherein the agent inhibits interaction of the LTBP with a TGFβ complex.

17. The method of claim 14, wherein the agent inhibits proteolytic cleavage of LTBP.

18. A method for identifying an agent that modulates proliferation and/or migration of smooth muscle cells, comprising:

(i) identifying an agent which inhibits the kinase activity of an integrin linked kinase, and

(ii) assessing the ability of the agent to modulate proliferation and/or migration of smooth muscle cells.

19. The method of claim 15, wherein the agent inhibits phosphorylation of integrin subunits.

20. A method for identifying an agent that modulates proliferation and/or migration of smooth muscle cells, comprising:

(i) identifying an agent which inhibits activation of a LEF-1/β-catenin signaling pathway, and

(ii) assessing the ability of the agent to modulate proliferation and/or migration of smooth muscle cells.

21. The method of any of claims 10, 12, 14, 15, 18 or 20, comprising the further step of formulating a pharmaceutical preparation comprising one or more agents identified as able to modulate proliferation and/or migration of smooth muscle cells.

22. A method for modulating proliferation and/or migration of smooth muscle cells comprising contacting the smooth muscle cells with an agent identified by the method of any of claims 10, 12, 14, 15, 18 or 20 as able to modulate proliferation and/or migration of smooth muscle cells.

23. The method of claim 22, wherein the smooth muscle cells are contacted with the agent *in vitro*.

24. The method of claim 22, wherein the agent is administered to animal in order to treat or prevent unwanted proliferation of smooth muscle cells.

25. The method of claim 24, wherein the agent is administered to animal in order to treat or prevent restenosis.

26. The method of claim 24, wherein the agent is administered to animal in order to treat or prevent atherosclerosis.

27. The method of claim 24, wherein the agent is administered to animal in order to maintain an expanded luminal volume following angioplasty or other vessel trauma.

28. A method for treating or preventing unwanted proliferation of smooth muscle cells in animal, comprising:

(i) identifying an agent which inhibits the biological activity of, or inhibits expression of, a gene product which is up-regulated during differentiation of neural crest cells to smooth muscle cells, the gene product having a biological activity required for proliferation and/or migration of smooth muscle cells; and

(ii) administering to animal in need thereof an amount of the agent which is effective to inhibit unwanted proliferation of smooth muscle cells.

29. A method for treating or preventing abnormal, pathological or inappropriate proliferation of smooth muscle cells in animal, comprising:

(i) identifying a gene product which is up-regulated during differentiation of neural crest cells to smooth muscle cells, the gene product having a biological activity required for proliferation and/or migration of smooth muscle cells;

(ii) identifying an agent which inhibits the biological activity of the gene product, or which inhibits expression of the gene product, so as to inhibit proliferation of smooth muscle cells; and

(iii) administering to animal in need thereof an amount of the agent which is

effective to inhibit unwanted proliferation of smooth muscle cells.

30. A method for identifying an agent that inhibits proliferation of smooth muscle cells, comprising:

(i) identifying an agent which inhibits the biological activity of a gene product which is up-regulated during differentiation of neural crest cells to smooth muscle cells, the gene product having a biological activity required for proliferation and/or migration of smooth muscle cells; and

(ii) assessing the ability of the agent, or an analog thereof, to modulate proliferation and/or migration of smooth muscle cells.

Add C2)

add D3

add E3